

§ 1039.105

40 CFR Ch. I (7–1–10 Edition)

to the FEL caps in Table 1 of this section instead of the otherwise applicable FEL caps in § 1039.101(d)(1), § 1039.102(e), or § 1039.102(g)(2), subject to the following provisions:

(1) The provisions of this paragraph (g) apply during the model years shown in Table 1 of this section. During this period, the number of engines certified to the FEL caps in Table 1 of this section must not exceed 20 percent in any single model year in each power category. The sum of percentages over the four-year period must not exceed a total of 40 percent in each power category. If you certify an engine under an alternate FEL cap in this paragraph (g) for any pollutant, count it toward the allowed percentage of engines certified to the alternate FEL caps.

(2) If your engine is not certified to transient emission standards under the provisions of § 1039.102(a)(1)(iii), you must adjust your FEL upward by a temporary compliance adjustment fac-

tor (TCAF) before calculating your negative emission credits under § 1039.705, as follows:

(i) The temporary compliance adjustment factor for NO_x is 1.1.

(ii) The temporary compliance adjustment factor for PM is 1.5.

(iii) The adjusted FEL (FEL_{adj}) for calculating emission credits is determined from the steady-state FEL (FEL_{ss}) using the following equation:

$$\text{FEL}_{\text{adj}} = (\text{FEL}_{\text{ss}}) \times (\text{TCAF})$$

(iv) The unadjusted FEL (FEL_{ss}) applies for all purposes other than credit calculation.

(3) These alternate FEL caps may not be used for phase-in engines.

(4) Do not apply TCAFs to gaseous emissions for phase-out engines that you certify to the same numerical standards (and FELs if the engines are certified using ABT) for gaseous pollutants as you certified under the Tier 3 requirements of 40 CFR part 89.

TABLE 1 OF § 1039.104—ALTERNATE FEL CAPS

Maximum engine power	PM FEL cap, g/kW-hr	Model years for the alternate PM FEL cap	NO _x FEL cap, g/kW-hr	Model years for the alternate NO _x FEL cap
19 ≤ kW < 56	0.30	¹ 2012–2015
56 ≤ kW < 130 ²	0.30	2012–2015	3.8	³ 2012–2015
130 ≤ kW ≤ 560	0.20	2011–2014	3.8	⁴ 2011–2014
kW > 560 ⁵	0.10	2015–2018	3.5	2015–2018

¹For manufacturers certifying engines under Option #1 of Table 3 of § 1039.102, these alternate FEL caps apply to all 19–56 kW engines for model years from 2013 through 2016 instead of in the years indicated in this table. For manufacturers certifying engines under Option #2 of Table 3 of § 1039.102, these alternate FEL caps do not apply to 19–37 kW engines except in model years 2013 to 2015.

²For engines below 75 kW, the FEL caps are 0.40 g/kW-hr for PM emissions and 4.4 g/kW-hr for NO_x emissions.

³For manufacturers certifying engines in this power category using a percentage phase-in/phase-out approach instead of the alternate NO_x standards of § 1039.102(e)(1), the alternate NO_x FEL cap in the table applies only in the 2014–2015 model years if certifying under § 1039.102(d)(1), and only in the 2015 model year if certifying under § 1039.102(d)(2).

⁴For manufacturers certifying engines in this power category using the percentage phase-in/phase-out approach instead of the alternate NO_x standard of § 1039.102(e)(2), the alternate NO_x FEL cap in the table applies only for the 2014 model year.

⁵For engines above 560 kW, the provision for alternate NO_x FEL caps is limited to generator-set engines. For example, if you produce 1,000 generator-set engines above 560 kW in 2015, up to 200 of them may be certified to the alternate NO_x FEL caps.

(h) *Delayed compliance with labeling requirements.* Before the 2011 model year, you may omit the dates of manufacture from the emission control information label as specified in § 1039.135(c)(6) if you keep those records and provide them to us upon request.

[69 FR 39213, June 29, 2004, as amended at 70 FR 40462, July 13, 2005; 72 FR 53130, Sept. 18, 2007; 75 FR 22988, Apr. 30, 2010]

§ 1039.105 What smoke standards must my engines meet?

(a) The smoke standards in this section apply to all engines subject to emission standards under this part, except for the following engines:

(1) Single-cylinder engines.

(2) Constant-speed engines.

(3) Engines certified to a PM emission standard or FEL of 0.07 g/kW-hr or lower.

(b) Measure smoke as specified in § 1039.501(c). Smoke from your engines

may not exceed the following standards:

- (1) 20 percent during the acceleration mode.
- (2) 15 percent during the lugging mode.
- (3) 50 percent during the peaks in either the acceleration or lugging modes.

§ 1039.107 What evaporative emission standards and requirements apply?

There are no evaporative emission standards for diesel-fueled engines, or engines using other nonvolatile or non-liquid fuels (for example, natural gas). If your engine uses a volatile liquid fuel, such as methanol, you must meet the evaporative emission requirements of 40 CFR part 1048 that apply to spark-ignition engines, as follows:

- (a) Follow the steps in 40 CFR 1048.245 to show that you meet the requirements of 40 CFR 1048.105.
- (b) Do the following things in your application for certification:
 - (1) Describe how your engines control evaporative emissions.
 - (2) Present test data to show that equipment using your engines meets the evaporative emission standards we specify in this section if you do not use design-based certification under 40 CFR 1048.245. Show these figures before and after applying deterioration factors, where applicable.

§ 1039.110 [Reserved]

§ 1039.115 What other requirements apply?

Engines that are required to meet the emission standards of this part must meet the following requirements, except as noted elsewhere in this part:

- (a) *Crankcase emissions.* Crankcase emissions may not be discharged directly into the ambient atmosphere from any engine throughout its useful life, except as follows:
 - (1) Engines may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing.
 - (2) If you take advantage of this exception, you must do the following things:
 - (i) Manufacture the engines so that all crankcase emissions can be routed

into the applicable sampling systems specified in 40 CFR part 1065.

- (ii) Account for deterioration in crankcase emissions when determining exhaust deterioration factors.

(3) For purposes of this paragraph (a), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be discharged directly into the ambient atmosphere.

(b)–(d) [Reserved]

(e) *Adjustable parameters.* Engines that have adjustable parameters must meet all the requirements of this part for any adjustment in the physically adjustable range. An operating parameter is not considered adjustable if you permanently seal it or if it is not normally accessible using ordinary tools. We may require that you set adjustable parameters to any specification within the adjustable range during any testing, including certification testing, selective enforcement auditing, or in-use testing.

(f) *Prohibited controls.* You may not design your engines with emission-control devices, systems, or elements of design that cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. For example, this would apply if the engine emits a noxious or toxic substance it would otherwise not emit that contributes to such an unreasonable risk.

(g) *Defeat devices.* You may not equip your engines with a defeat device. A defeat device is an auxiliary emission-control device that reduces the effectiveness of emission controls under conditions that the engine may reasonably be expected to encounter during normal operation and use. This does not apply to auxiliary-emission control devices you identify in your certification application if any of the following is true:

- (1) The conditions of concern were substantially included in the applicable test procedures described in subpart F of this part.
- (2) You show your design is necessary to prevent engine (or equipment) damage or accidents.
- (3) The reduced effectiveness applies only to starting the engine.

[69 FR 39213, June 29, 2004, as amended at 72 FR 53130, Sept. 18, 2007]